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A Subsystem Approach to Understanding the Inflammatory Response in a Wound.

The inflammatory response in a wound is composed primarily of neutrophil and macrophage cell activity. This work uses an ODE subsystem approach to investigate the relative dynamics of these two cell populations in response to debris, including platelets and pathogens. Experimental data from Broughton et al. (2006) and Leibovich & Ross (1975) were used as validation and steady state analysis was performed. This model will be included in a larger wound healing model to explore the effect of cortisol on wound healing.